

ARG42539 anti-ATP1A1 / Na+ K+ ATPase alpha 1 antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes ATP1A1 / Na+ K+ ATPase alpha 1
Tested Reactivity	Hu, Ms, Rat, Dog, Mk
Tested Application	IHC-Fr, IHC-P, WB
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	ATP1A1 / Na+ K+ ATPase alpha 1
Species	Human
Immunogen	Purified recombinant peptide within aa. 100 to the N-terminus of Human ATP1A1 / Na+ K+ ATPase alpha 1.
Conjugation	Un-conjugated
Alternate Names	Sodium pump subunit alpha-1; Na; +; Sodium/potassium-transporting ATPase subunit alpha-1; EC 3.6.3.9

Application Instructions

Application table	Application	Dilution
	IHC-Fr	1:250 - 1:1000
	IHC-P	1:250 - 1:1000
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	LS174T	
Observed Size	~ 100 kDa	

Properties

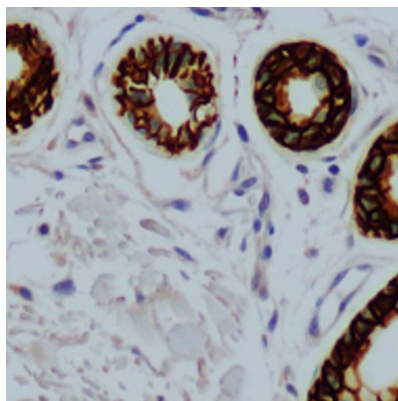
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.05% Sodium azide and 20% Glycerol.
Preservative	0.05% Sodium azide
Stabilizer	20% Glycerol
Concentration	3 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

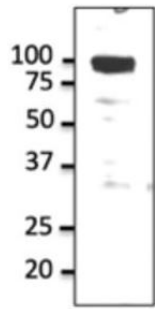
Gene Symbol	ATP1A1
Gene Full Name	ATPase, Na ⁺ /K ⁺ transporting, alpha 1 polypeptide
Background	The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na ⁺ /K ⁺ -ATPases. Na ⁺ /K ⁺ -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit (beta). The catalytic subunit of Na ⁺ /K ⁺ -ATPase is encoded by multiple genes. This gene encodes an alpha 1 subunit. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2009]
Function	This is the catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with the exchange of sodium and potassium ions across the plasma membrane. This action creates the electrochemical gradient of sodium and potassium ions, providing the energy for active transport of various nutrients. [UniProt]
Calculated Mw	113 kDa
PTM	Phosphorylation on Tyr-10 modulates pumping activity. Phosphorylation of Ser-943 by PKA modulates the response of ATP1A1 to PKC. Dephosphorylation by protein phosphatase 2A (PP2A) following increases in intracellular sodium, leading to increase catalytic activity (By similarity). [UniProt]
Cellular Localization	Cell membrane, sarcolemma; Multi-pass membrane protein. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV. [UniProt]

Images



ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody IHC-P image

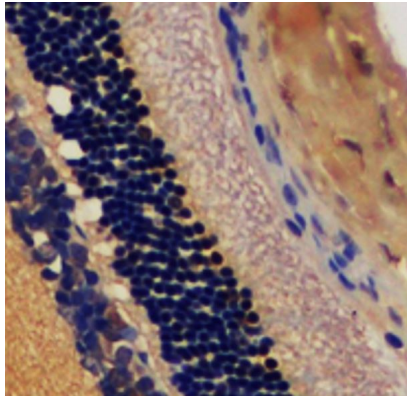
Immunohistochemistry: Human skin stained with ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody at 1:500 dilution.



LS174T

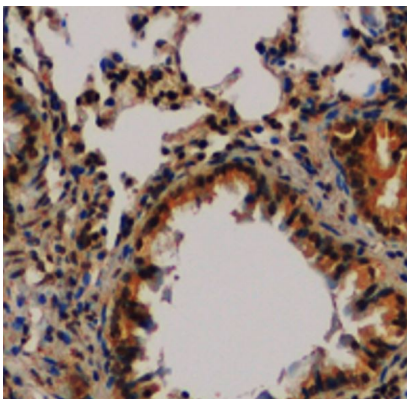
ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody WB image

Western blot: 50 µg of LS174T cell lysate stained with ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody at 1:1000 dilution.



ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody IHC-P image

Immunohistochemistry: Rat eye stained with ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody at 1:500 dilution.



ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody IHC-P image

Immunohistochemistry: Mouse kidney stained with ARG42539 anti-ATP1A1 / Na⁺ K⁺ ATPase alpha 1 antibody at 1:500 dilution.